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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/033,397

12/27/2001

Hiromi Yatsuda

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03/31/2004

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EXAMINER

WILCZEWSKI, MARY A

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,397

Applicant(s)

YATSUDA, HIROMI

Examiner

Mary Wilczewski

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pw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 18 is/are allowed.
- 6) ☒ Claim(s) 13, 15-17, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/583,382.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the amendment filed on 14 January 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 15, 16, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno et al., U.S. Patent 6,077,757, newly cited, in view of Morishima, US 2001/0011857, of record.

Mizuno et al. disclose a method of manufacturing an electronic component to be mounted on a circuit board comprising forming an electronic circuit device 15 and an electrode pad 16 on one main surface of a first substrate 14, adhering a second substrate to the first substrate, forming a plurality of holes in the second substrate at sites confronting the plurality of electrode pads, forming a bump electrode 21 in each of the plurality of openings in the second substrate, and severing the electronic elements to obtain a plurality of electronic components, see figures 7A-7F. Mizuno et al. lack anticipation only of forming a plurality of sealing walls adhered to one surface of the first substrate configured to enclose each of the electronic circuit devices. Morishima teaches a bonding method which includes the steps of forming sealing walls 2a and 2b to enclose the electronic device. Morishima discloses that insulating sealing walls 2a and

2b protect the electronic device from being inadvertently damaged during the bonding process, see column 2, paragraphs [0032] and [0033]. It would have been obvious to one skilled in the art to form sealing walls surrounding the electronic component in the known method of Mizuno et al. in order to protect the electronic component from being damaged during the bonding step.

Allowable Subject Matter

Claims 14 and 18 are allowable over the prior art of record.

Response to Arguments

Applicant's arguments filed January 14, 2004, have been fully considered but they are not persuasive. Applicant has argued that Mizuno et al. '757 contains no description or suggestion that the process of forming the electrically conductive member on the electrode pad could have a detrimental effect on the electronic circuit device. Therefore, Applicant has argued that the assertion that a person skilled in the art would apply the technique of forming insulating sealing walls before formation of the bump electrode disclosed by Morishima '857 to the invention disclosed by Mizuno et al. is erroneous. The Mizuno patent need not provide motivation for implementing the technique of Morishima into the method of Mizuno for the two patents to be properly combined. Morishima discloses that the formation of insulating sealing walls provides protection and prevents the integrated circuit from being inadvertently damaged during the fabrication process. It is maintained that one skilled in the art would recognize that

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the use of sealing walls as taught by Morishima would provide a benefit if implemented into the method of Mizuno et al., whether or not Mizuno et al. recognizes that the integrated circuit may be damaged during the fabrication process.

Applicant has further argued that Mizuno et al. does not teach to adhere a substrate having a plurality of openings to the sealing wall. Claim 13 merely requires the second substrate have a plurality of openings in it and does not require the openings be present in the second substrate prior to it being adhered to the sealing walls. That is, claim 13 does not recite that a second substrate having openings formed in it is adhered to the sealing walls. Note in the method of Mizuno et al. that openings are formed in the second substrate 18 after it is adhered to the first substrate, see figures 7A and 7B. The method of Mizuno clearly meets the limitations of claim 13, as presently written. Hence, Applicant's arguments are clearly not commensurate in scope with the present claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Mary Wilczewski at telephone number (703) 308-2771.

A handwritten signature in black ink, appearing to be 'M. Wilczewski', with a stylized, cursive script.

M. Wilczewski
Primary Examiner
Tech Center 2800